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THE PRINCIPLES AND PRACTICE OF MODERN LITHOTRITY, AND THE RECENT ISSUES BY WHICH THEY ARE IMPERILED.

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Read before the Tri-States Medical Society, at Springfield, Illinois, November 13th, 1878.

When a calculus remains for any time in the human bladder, that bladder becomes diseased. This is true even in those cases in which the stone is due to a nephritic calculus formed in the kidney and deposited in the bladder, after a journey from the pelvis of the kidney to the vesical cavity. The irritation due to its presence causes congestion of the walls of the bladder; hyperæmia of these tissues produces an augmented secretion of vesical mucus; and the normally acid urine has its reaction changed by the presence of an excessive quantity of alkaline mucus. The series of changes thus inaugurated are familiar, I doubt not, to all my auditors. The urine decomposes, ammonia develops, and to the mechanical irritation due to the presence of stone an equally potent cause of congestion is to be found in the chemical irritants which result from the changes induced in certain of the constituents of the urine. The surgeon knows that in addition to those measures necessary for the removal of the stone, others, looking to the control of the inflammatory action which it has excited, must be adopted. In many cases palliative measures only are admissible, for the changes induced in the vesical walls are too extensive to be entirely overcome. Thus, when congestion has been attended by the development in the walls of the bladder of those results of inflammatory action which become organized, not only are those structures thickened and altered, but the cavity of the bladder is diminished in size. On the other hand, when the course pursued by these pathological phenomena has been different, and prolonged retention of urine has been an element in the clinical history of the affection, atony, or even paralysis of the vesical walls, with dilatation of the cavity of the bladder, is to be expected. The extension of pathological phenomena along the ureters to the kidneys, or along the genital tract to the epididymes, explains why the kidneys and testes are implicated in cases in which the stone has remained in the bladder for a length of time. Congestion of the prostate and hypertrophy of the muscular tissues of the bladder are powerful agencies in producing enlargement of the former organ and the development of sacs in the walls of the latter. In addition to hypertrophy of the prostate and sacculation of the bladder, the extension of inflammatory action from the cystitis due to vesical calculi, and consequent development of disease in the ureters, vasa deferentia, epididymes, testes and kidneys, the constant irritation of the bladder by the stone may stimulate into active growth any latent tendency to carcinomatous degeneration. Tumors of the bladder, though rare, are, nevertheless, occasional complications of vesical

calculi which are indirectly due to the presence of the latter.

From the foregoing facts we learn why the surgeon is compelled to admit two elements into the problem which the removal of a vesical calculus presents to him—the one, the stone itself; the other, the state of the bladder. A certain amount of preliminary treatment, directed to improving the condition of the bladder, is necessary, it matters not what measure is adopted for removing the stone. This is not so vitally important in lithotomy, as in lithotrity, yet it is required in both operations. For the success of lithotrity the irritability of the bladder and urinary passages must be reduced to the minimum—this is one of the most important of the preliminary steps which the surgeon must take. Next, the general health of the patient must be improved to the maximum—this measure is likewise essential. In fact, in the case of a patient with stone, in whom it would be reasonably safe—so far as the other bodily organs, aside from the bladder, are concerned—to perform any capital operation, no surgeon can properly decide against giving him the relief lithotrity affords until both these indications have been met. It may be inquired why these steps should be taken. A moment's glance at the contra-indications of lithotrity will render apparent the answer. In general terms, stricture of the urethra, hypertrophy of the prostate, atony, or paralysis of the bladder, sacculation, or carcinomatous degeneration of the vesical walls, villous tumor of the *bas fond*, and renal disease, are the most serious obstacles to lithotrity. If to this list we add multiple calculi, and calculi too large or too hard to be crushed, we embrace all the special contra indications to this operation. Judicious measures can often increase the calibre of the urethra, reduce swelling of the prostate, and restore power to the contractile walls of the bladder. In a paper presented to the Ohio Valley Medical Association, in 1876, I summarized my views on these points in the following language:—

"If we revert to the essentials for lithotrity, it will be found that the crushing process is preferable in all cases where the stone will yield to the lithotrite, provided it is desirable to operate at all, and the urinary passages are large enough to admit the instrument with ease, and not so delicate but what it can remain in the bladder for a few moments at a time, and consider each one in detail, we will find, I think, that all the contra-indications to lithotrity can be arranged under one or other of these different heads.

"Is it desirable to operate at all? To this question a negative answer must be returned in many, very many, cases. Patients who suffer from advanced Bright's disease, aneurism of one or other of the great vessels, organic disease of the heart, and the like, are manifestly not subjects for lithotrity or any other capital operation. A microscopical examination of the urine should be made sufficiently often to convince the operator not only that he is not dealing with a case of incurable kidney disease, but that the patient before him is free from organic degeneration of the bladder; for experience shows that villous disease of that organ may, and not infrequently does, coexist with vesical calculus.

"The size of the urethra and the degree of irritability of the urinary passages are very important elements in the question of lithotrity or lithotomy. The smaller size and greater degree of irritability in the genito-urinary passages of a child renders the crushing operation less applicable than a resort to the knife. With advancing years this necessity for the employment of the knife grows less and less, until in many cases, in which the patients are still under puberty, the choice between the two operations will depend either solely, or to a very great extent, upon the ability of the surgeon to overcome vesical and urethral irritability to such a degree that the lithotrite can be tolerated in the bladder for a number of minutes in succession. It is sufficient, at present, to say that a judicious surgeon can overcome this hyperæsthetic state of the urinary mucous membrane in all cases where the passages are of a size to allow the entrance of a lithotrite, and it thus becomes evident that in the hands of such an operator the number of cases in which it will be possible to substitute the crushing for the cutting process will be much greater than in the hands of one who blindly follows the rule rather than strives to overcome contra-indications. The amount of obstruction afforded by a stricture of the urethra or an enlargement of the prostate gland, whether occurring alone or complicated by urinary fistulæ and chronic cystitis, can only be estimated in each individual case. Enlargement of the prostate can militate against crushing in those cases only in which the ob-

struction is great enough to interfere with the proper manipulation of the lithotrite. The chronic cystitis accompanying both stricture and prostatic hypertrophy, especially when attended by atony of the vesical walls, cannot be viewed as an evil in every sense of the word, for the fact that this condition of the walls of the bladder is accompanied by great tolerance on the part of the mucous membrane lining that organ—a degree of tolerance which makes that structure indisposed to take on inflammatory action when subjected to irritation arising from the presence of fragments of stone—prevents our including inflammation of the bladder among the conditions absolutely contra-indicating lithotrity.

"In cases where the general bodily health is such as to admit of an operation, and the state of the urinary organs favors lithotrity, a crushing operation may be rendered impracticable by the size or the composition of the stone. Thus, when the calculus is of oxalate of lime, and exceeds an inch in diameter, it may be mechanically impossible to crush it by any force that can be brought to bear upon it by the lithotrite. In a very large uric acid stone, or a stone composed in great part of phosphatic salts, although within the power of an instrument to crush, yet the number of sittings necessary, and the length of time during which the fragments would necessarily be in immediate contact with the lining membrane of the bladder, are circumstances which often induce the surgeon to resort to the knife, rather than to the lithotrite."

To recapitulate in few words: Vesical calculus occurs in men and women, in the adult and the infant, at one time complicating fatal disease, at another constituting the sole complaint under which the patient labors, and while the measures adopted for the relief of the patient must vary with the special circumstances of the individual case, yet no one should be subjected to lithotomy unless lithotrity is contra-indicated by one or other of the above named reasons. Good surgery and the dictates of humanity pronounce in favor of the painless and safe procedure by which the stone is crushed, and reserve for peculiar and exceptional cases the less tedious, and more brilliant operation by which the bladder is cut open and the stone removed at a single sitting, as in lithotomy.

The London *Lancet*, of March 16th, 1878, contains an account of the discussion at the Medico-Chirurgical Society of that city, which followed the reading of Sir Henry Thompson's paper presenting "An Analysis of Five Hundred Cases of Stone in the Male Adult." Sir James Paget stated that were he to recommence an active surgical practice he would begin with lithotomy, and reserve for lithotrity only those few cases in which the calculus could be got rid of in two or three sittings. Sir James further announced that he regarded lithotrity as hardly susceptible of additional improvement, and yet its results were often incomplete and unsatisfactory. Even Sir Henry Thompson seemed to sympathize with this feeling, and stated that in his last hundred cases he had been drawing the line more closely, and reverting to lithotomy in a larger proportion of cases. With such statements to guide him, it is not surprising that Dr. Van Buren concludes that "the general tone of the discussion was not very favorable to lithotrity," especially when Sir Henry Thompson, in his final summing up, plead for an extension of the line so as to include cases "where the stone might be crushed at three, or at most, four sittings," beyond which point "he should mostly prefer to cut."

No new objections to the operation are urged as grounds for these views. On the contrary, the strongest points made against lithotrity were on account of the cystitis "due to the injury done to the mucous membrane by sharp fragments of stone, and by continued instrumentation;" the atony liable to be developed by it in old people, with a continuation of vesical irritability and phosphatic deposits; and the liability to overlook minute fragments, and the consequent unsatisfactory results.

With this necessarily brief and imperfect outline of the principles upon which is based the modern practice of lithotrity, considered in connection with the utterances and conclusions of eminent surgeons whose views have just been reported, am I not right in announcing that the new issues thus raised are calculated to do injustice to, and even imperil, lithotrity, the great triumph of conservative surgery? Must the body of the profession, the world over, be bound by the conclusions to be derived from the practice of a few illustrious English surgeons? May not London specialists enjoy a practice which is not truly representative, and must the profession resign itself to the statement that lithotrity is only applicable to the comparatively limited class of cases in whic

the calculus can be crushed "at three, or at most, four sittings?"

A few words as to the latter point:

In the first place, notoriously bad cases—those occurring in wealthy men who can command every agency which will mitigate their sufferings, and postpone to the last moment the necessity for an operation—constitute a certain proportion of the practice which, after traveling far and near, and consulting surgeon after surgeon, finds its way to the eminent metropolitan specialist. These patients are able to command the services of a Thompson, or a Paget, of a Coulson, or a Cadge, and their wishes have untold influence in determining the kind of operation employed. It is among such men that the calculus is permitted to grow, until the suffering it causes becomes unbearable; then these patients naturally determine to be relieved by the least painful and least threatening of the two methods available for that purpose. Exclude such cases as these from among the patients with advanced bladder and kidney disease—in whom the stone is large, the urinary passages tender, and the system irritable and predisposed to febrile reaction whenever the genito-urinary organs are disturbed—upon whom eminent lithotritists have operated, and I venture to say that there would be a decided diminution in the death rate of patients in whom numerous sittings would have been necessary had not the cases resulted fatally!

In the next place, extensive degeneration of the kidneys is far more common in England than in this country, and vastly more frequent on the Atlantic seaboard of this continent than in the Mississippi Valley. Thus, even the local practice of London surgeons has an element which is adverse to the successful treatment of just that class of cases with stone which require numerous applications of the lithotrite for their relief.

Other factors, which I have not time to dwell upon now, enter into and complicate the problem, but the foregoing illustrations will show that the exceptions which can be taken to conclusions founded upon the analysis of a special class of cases are such as cast doubt upon the weight and cogency of any argument based on such analysis.

A justly distinguished New York Surgeon—Professor Wm. H. Van Buren, of the Bellevue Hospital Medical College—takes occasion to refer to this "new departure" in the operative surgery of the bladder foreshadowed by the paper of Thompson, and inaugurated by the discussion at the Medico-Chirurgical Society and in an article which he contributed to the *Medical Record* of September 28th, 1878, grants the validity of the objections made to the operation, but doubts the necessity of recurring to lithotomy as the only remedy, and asks: Cannot lithotrity be rendered less imperfect? To this question he answers that "there is reason to believe that a discovery has been made by an American surgeon which may take away from lithotrity its chiefest objection, and it may prove that, as an operation, it *is* susceptible of improvement." Dr. Van Buren thinks that the evidence adduced by Professor Bigelow, of Harvard, goes far toward the demonstration of "a tolerance by the bladder of protracted manipulation, which has not been hitherto recognized,"* and publishes the details of cases which go to show the truth of the principles announced by the Boston surgeon. I am disposed to accord great value to this plan of removing the calculus, and believe that Bigelow's system—complete granulation of the stone at one sitting, with measures to evacuate the *débris*, the patient meanwhile being under the influence of an anæsthetic—will be the means of saving from the knife another section of the class of calculous patients now generally abandoned to the lithotomist, although in doubt, I must confess, as to the novelty of some of Dr. Bigelow's propositions. Nothing but the imperfection of the original apparatus prevented the first operation, performed in the presence of the representatives of the French Academy of Medicine—the Barons Chaussier and Percy—from being a case of "Lithotrity by a Single Operation." In that case the operation was continued, at intervals, for forty minutes. Eleven days subsequently it was repeated; the third and last sitting was held at the end of an interval of ten days; twenty days after the first operation the man was free from stone.

Again, the Baron Heurteloup, on the 24th of July, 1829, operated on a patient, sixty-four years of age, at the house of Mr. White, a surgeon in London, and in fourteen minutes removed a stone fourteen lines in diameter. Nevertheless, Dr. Bigelow has done good service in calling attention to this property of the

Bigelow—"Lithotrity by a Single Operation." *American Journal of the Medical Sciences*, January, 1878.

bladder—for it seems that the inculcation of the salutary rule never to keep any instrument in the bladder longer than the conventional limit of from three to four minutes, has originated an idea that the bladder is exceptionally intolerant of instrumentation—and while I believe, as I have already stated, his method will save some patients from the alternative of the knife, I doubt if it can do much for that class in which, according to the rule announced in this paper, lithotrity is the measure to which they are entitled to look for relief.

Dismissing Professor Bigelow's plan as inapplicable in the vast majority of cases in which the stone should be crushed, let us review the steps calculated to render lithotrity a painless and successful operation.

In the first place, the capabilities of the operation must be made the subject of earnest study. To dwell on this point as its importance merits would be to inflict on you a voluminous disquisition.

Secondly, individual experience must be accumulated. This point, also, will be dismissed for the same reason. There is one important fact to be borne in mind in this connection, and that is, other things being equal, the death rate in lithotrity will diminish in direct proportion to the experience of the operator.

Thirdly, the preliminary treatment adopted materially modifies the fatality of the operation. Two of the most important indications the surgeon must meet have already been recited. They are:

(*a.*) To improve to the utmost the patient's general health; and

(*b.*) To reduce the co-existing inflammation of the genito-urinary tract.

A third measure of equal moment is—

(*c*) To determine accurately the patient's temperature, and to discover and record any variations from the normal standard.

The lithotritist should have the temperature of his patient taken every six hours, or oftener. It is not enough that the family be supplied with an axillary thermometer, and that the unskilled efforts of inexperienced persons be recorded for the surgeon's information. I consider this measure of vital importance, and in insisting that a proper instrument be procured, and its application confided to professional hands, I am consulting the surgeon's interest almost as much as the patient's. Keep a registered thermometer by the patient's bedside—preferably one that possesses an index which records the elevation reached by the mercury—and at regular intervals have the bulb passed into the patient's rectum, and kept there from five to ten minutes at a time. If the surgeon visits his patient but twice a day, yet by using a self-recording thermometer he can have the temperature taken with mathematical accuracy four times in every twenty-four hours. Thus, let him take the temperature himself at his morning visit, and after noting its height, return the index to its position, so that at the next appointed hour the patient can insert the thermometer without assistance. The latter need do nothing more than return the instrument to its case after removing it from the bowel—the index will remain at the point where the heat of the body has raised it until the surgeon's evening visit, when he can note its degree, return the index to a point below the standard of health, and take the patient's temperature for the evening. The latter recorded, the instrument once more arranged for use as at noon, is confided to safe hands, in order that the temperature may be taken at midnight. It very frequently happens that these temperature observations reveal a daily elevation beyond the bounds of health—an exacerbation that diminishes, and may even disappear with the adoption of measures designed to prepare the patient for the operation. In no event should the stone be crushed while the temperature curve deviates materially from a healthy standard!

Fourthly, the remedial measures which aid in subduing cystitis prior to crushing the stone may likewise prove of incalculable value in preventing the redevelopment in the bladder of inflammatory action, from the irritation caused by fragments of the calculus.

There is one drug which renders the lithotritist great and timely assistance: I refer to opium, preferably employed in the form of morphia, and administered hypodermically. By suspending the activity of the muscular walls, and diminishing the sensibility of the mucous lining of the bladder, this drug, in great degree, prevents the injury that otherwise would inevitably follow the violent contraction of the vesical tissues upon the sharp, angular fragments which result from the action of the lithotrite. What lithotritist whose experience has been at all extensive has not seen the wonderful change which a chill marking the onset of cystitis has initiated in a patient who, but a

few hours before, was doing so well? The torturing pain in perineum and bladder, the nervous anxiety and constant restlessness, but, above all, the sharp attacks of vesical spasm recurring every moment or two, in which blood and pus, mingled with urine, are forcibly expelled from the urethra, mark the imminence of the bladder's peril, and constitute a clinical picture not readily forgotten. The surgeon is seldom placed in a situation demanding greater promptitude and skill; but rarely are his efforts so potent for good or for evil. The bladder must be quieted, at all hazards. If a fragment has become impacted in the urethra it must be removed; and if, despite all efforts, the bladder cannot otherwise be brought under control, lithotomy must be performed, the fragments of stone removed, and the patient thus given a chance for his life. But the latter alternative need rarely be embraced, thanks to the efficacy of remedial agents, especially morphia, administered hypodermically. The instant any evidence of cystitis develops inject a large portion of morphia, the size of the dose being determined by the patient's susceptibility, as learned by absolute test during the preliminary treatment, and not judged of by conventional rules, and in the vast majority of cases the patient will be instantly relieved from pain, and the free perspiration then developed will mark the subsidence of all threatening symptoms.

Finally, the lithotritist can rely with confidence on the indications afforded by the thermometer relative to many important details pertaining to the operation.

Armed with a knowledge of the patient's susceptibility to the action of opium, and possessed of the temperature observations which show how nearly the latter's heat curve approximates that of health, the surgeon has data which not only enable him to recognize the first abnormal sign, but furnish him the means of counteracting or controlling it. The information thus obtained is a guide to the number, the duration and the frequency of the sittings. To the question, How are we to treat the cystitis which so frequently occurs after first crushings, and which is regarded by leading British lithotritists as "so serious a defect" in lithotrity? I will answer by saying that by the adoption of the measures advocated in this paper vesical inflammation can, in many cases, be prevented; in others, its severity will be mitigated; and in all instances its earliest approaches will be recognized, and its progress combated with all the resources at the surgeon's command!

REMARKS ON THE CAUSES OF CONCEALED POST-PARTUM HEMORRHAGE.

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Case 1.—Was called to attend Mrs. A., aged twenty-three, in her first confinement, at full term. There was nothing unusual, save that the pain, from the first, was very severe. The agony during the contractions was extreme, with but little rest between. The entire labor lasted about five hours, and at its conclusion there was no more than the ordinary amount of blood lost. The abdominal bandage was applied, as usual, over a well contracted uterus, and all seemed in excellent condition. In about thirty minutes the usual symptoms of concealed uterine hemorrhage came on—namely, ashy paleness of the face, sunken features, cold skin, no pulse at the wrist, and a symptom which is quite pathognomonic of this affection, a constant turning of the head from side to side upon the pillow.

On examination I found the uterus firmly contracted and no larger than before. In two or three minutes, however, the contraction gave way, the uterine tumor gradually disappeared from the grasp of the hand over the abdomen. As is the custom, I "turned out the clots," amounting to very little as to quantity, having given, in the meantime, ergot, ipecac, and brandy in pretty full doses. The uterus then contracted to its proper size and consistence, the pulse returned at the wrist, the capillary circulation was re-established, and all seemed well for the time. At intervals of about half an hour the symptoms returned, just as detailed above, two or three times, when they finally disappeared, and the patient made a rather slow but good recovery. In no instance did the uterine contraction disappear until the other symptoms were fully established, and in no instance was there more than one or one and a half ounces of blood lost.

Case 2.—Attended Mrs. B., aged forty-six years, in her fifth confinement, on the 8th day of July. The labor was concluded in about two hours, and was in every way easy and natural. She made a good recovery, requiring no treatment whatever. On the sixth day of August, one month after the birth of her child, I was called in great haste, and found her in a complete state of collapse. Cold skin, flooded with perspiration. No

pulse at the wrist. Continual tossing of the head from side to side; eyes closed. Face ashy pale; lips white, and the patient in constant dread of impending death. Intellection not at all affected. The attack came on rapidly. She had been in her usual health, except that for the last three or four days she had some dyspeptic symptoms, one of which was distention and a feeling of uneasiness after eating, in the region of the stomach. She was thin of flesh, as was usual with her during lactation. Her child is a model of robust health. She had eaten nothing that day, and some efforts at vomiting produced nothing but a little colorless mucus. She has had no exhausting discharges of any kind. Bowels regular; urine normal in quantity and quality; uterus healthy.

She complains of a deadly sensation of *sinking* at the pit of the stomach, and constant whirling of the head (as she calls it).

Under the free use of brandy and stimulating frictions she rallied for a few hours, but relapsed into the same condition as profoundly as before. Recognizing, as no one could fail to recognize, the strong resemblance between this and the ordinary cases of so-called concealed uterine hemorrhage, I gave her pretty large doses of ipecac., which first stopped the vomiting, and afterward induced a nausea of a different character, apparently, for with it all the alarming symptoms subsided. There were relapses of more or less severity for seven or eight days, which the ipecac. never failed to control. After the subsidence of the first attack it was never again necessary to give the drug in such doses as to produce nausea and vomiting. In the meantime the patient was given tonics and suitable food, and about the eighth day she was discharged, and is in good health up to this time, a period of one year and three months.

These two cases will, of course, be recognized by every physician, as belonging to a type of disease very often met with in practice. They are introduced as the basis of a few remarks as to their pathology.

The universally received explanation of the condition present in Case No. 1 is, that the frightful train of symptoms is produced by loss of blood. But they are strikingly unlike those produced by hemorrhage from other causes and other localities. And who has not been struck by the surprising and unaccountable disproportion between the loss of blood and the effect produced upon the patient in very many of these cases? In all where I have had opportunity to observe them from the first, the failure of uterine contraction and the concealed hemorrhage followed the attack and did not precede it. Does it not follow, then, that the collapse of the uterus and the consequent hemorrhage is merely one of the manifestations of a diseased condition somewhere else? In Case No. 2 we have all the conditions usually present in post-partum hemorrhage, except the hemorrhage. The treatment in both cases was essentially the same, with a like result in each.

To "turn out the clots" may not always be a useless operation, but that it is based upon a false pathology, is very probable, at least.

No doubt these cases, or most of them, have their origin in some temporary derangement of the ganglionic system of nerves. And that there is present an atonic condition of the nerve fibre, which may be brought about by a great variety of causes. It is not confined by any means to females. Several perfectly well marked cases in males have fallen under my own observation.

Nausea and vomiting has always been considered, and it really is, in most cases of tedious labor, a favorable indication. Not because it produces relaxation of the parts undergoing dilatation (as some suppose), but because the act itself, a purely nervous one, indicates that the proper coördination between the nerve centre and the muscular fibre to be moved has been reëstablished.

The function of the great sympathetic system is probably not understood in its entirety by any one. That it has much to do with circulation, enervation, digestion and assimilation, is plain. That it presides over the contractility of the unstriped muscular fibre, wherever found, is pretty clearly demonstrated. It is fair to presume that serious disturbances to the organism would result from even a temporary loss of function in so important a part of the human anatomy. The collapse in cholera and cholera morbus can hardly be accounted for in any other way, and "concealed hemorrhage," so called, is but another manifestation of the same diseased condition. The action of ergot and ipecac is perfectly consistent with this view. They both act upon the unstriped muscular fibre by their reflex stimulating effect upon the great ganglionic nerve centres. The hemorrhage is not always an unimportant factor in these cases. It is always right to control it by all appliances at the disposal of the attending physician, but he who looks no further than the collapsed wall of the uterus for the real cause of the difficulty in this most serious ailment takes a very short-sighted and false view of the subject.

—The Commission appointed by the last Congress to report on the nature, causes and prevention of hog cholera have their report ready, and it will appear soon.

Hospital Reports.

MEDICAL DEPARTMENT OF THE UNIVERSITY OF THE CITY OF NEW YORK.

CLINIC FOR DISEASES OF THE NERVOUS SYSTEM,

BY PROFESSOR WILLIAM A. HAMMOND.

Reported by Worthington Myers, A.M. M.D.

Cerebral Congestion.

(*Continued from Vol. xxxix, p. 537.*)

Gentlemen:—At last lecture I finished the symptoms of cerebral congestion. In the passive form they are not so dangerous. In the soporific form the symptoms are more intense. It may be said, in general terms, whatever may tend to augment the flow of blood to the head produces active congestion, but if retarded, the passive form. For instance, emotion, sorrow, intellectual effort, etc., increases the flow of blood to the head. Every time a person faints, every time he utters a sound, every time he tastes, the amount of blood to the brain is increased. Emotional disturbance of a sorrowful character tends to produce it. Some attribute it to heart disease, and but few to its real cause, congestion. When the Roman mothers heard of the death of their sons at the battle of Cannæ, the revulsion of feeling was so great that they were struck dead. Another cause is the excitement produced in giving evidence on the witness stand. People often make the remark, "if it is not so, may I be struck dead." When this occurs the masses suppose it was a visitation of providence. Stooping down, pulling on the boots, straining at stool, efforts in labor, all tend to produce it.

The passive form is induced by anything which prevents the return of blood to the brain. Tumors in the neck, tight collars, etc. Cases of cerebral congestion were quite frequent in the United States Army, owing to the regulation stock at one time worn. Hearty meals at night tend to produce it, by pressing upon the abdominal veins, which tends to impede the return of the blood.

The number of post-mortem examinations not very large. In the first place, the convolutions are flattened by serum effused, and instead of being rotund, are of a flattened form. The veins and arteries are enlarged and tortuous. Upon cutting into the substance of the brain, you will find the small red spots called the puncta vasculosæ. Now, when congested they are found in large numbers through the whole white substance, of a pinkish hue, and the tissue softened. And again, you will find what is very properly named the cribriform stage. The blood vessels of the brain not in contact with the brain substance, because, between it and the substance of the brain is a canal, and in that canal the vessel runs. Now, the advantage of this arrangement is, the brain can undergo a considerable amount of congestion without morbid phenomena. If it were not for this wise provision a man could not think; he would fall down in a stupor. Hence the advantage of this arrangement. Now, after death, these vessels shrink and leave holes, and when you see this it is the cribriform state, like a sieve, and you may know that the patient has suffered from cerebral congestion.

Now, as regards the pathological physiology, the excessive amount of brain work a patient undergoes increases the amount of blood to the brain. They lose their elasticity, as a worn-out India rubber ball, or a bundle of leather. With congestion, therefore, they lose their elasticity. The fact that they do not sleep at night is a symptom of congestion, viz., increase of flow of blood; a man who does not sleep at night is consuming his brain; he increases the amount of blood to the brain. The theory they act upon is that the amount of blood is not increased by pressure. The brain is enclosed in a skull, and does not admit of pressure. For instance, you stoop down and hold the head in a dependent position; the cerebro-spinal fluid rushes into the ventricle, you feel a sense of effusion and fullness in the head. The moment you rise up you feel lighter, because this pressure is removed. The dizziness is owing to the fact that the fluid rushes out, and if this is so, the blood can do the same thing. We have actual proof this is so. Several years ago I performed a number of experiments, and came to the conclusion that when a person did not sleep, the amount of blood to his brain was increased, and in order that he may sleep, the amount of blood must be lessened.

The following case came under my observation. A man, standing on the platform of a car, was suddenly thrown off, the vertex of the head striking the curb stone. He was taken up insensible, and remained under treatment six months. He was subject to epileptic convulsions. He had a cavity in his skull three inches wide and about six inches long. Greater portion of right parietal bone, part of frontal, occipital and temporal bones were involved. I observed that when he slept, the scalp over this fissure was depressed, when awake, something increased the pressure. Now nothing could do this except blood. This was increased and diminished. A work published previous to this, by Mr. Durham, shows that he bored holes in the skulls of animals, and found that when they slept the pressure was diminished, but increased when awake, clearly demonstrating the fact that this increase is caused by the pressure of the blood.

Subsequently Dr. Weir Mitchell, of Philadelphia, and myself invented an instrument, neither of us knowing that the other had anything of the kind, which shows the theory clearly. This instrument was unknown to either, but made simultaneously. For example, we trephine a dog; the rubber of the instrument merely touches the dura-mater lightly; upon increased pressure the fluid rises in the tube; when diminished, it falls; when he sleeps, the fluid falls; when awake, it rises in the tube; while the relation which the blood bears to the symptoms is arterial and does not pass a certain change, he is excited, viz., the stage of exaltation. He is passively exhilarated. A great many patients are in this state, *the excited*. Another element is brought to bear; he is then depressed. Symptoms of paralysis, numbness, the blood vessels so large and distended they press upon the

brain. In some you have stupor, apoplexy, rupture and cerebral hemorrhage developed.

The next point is in regard to the diagnosis. It may be confounded with a great many diseases, viz. with Bright's Disease. You may have stupor and pain in head from the presence of urea in the blood, but to establish the fact *you must have a full history of the case.* Examine all possible contingencies which may come under your observation. If, upon examination, you discover albumen, you will be safe in pronouncing the case as one of Bright's Disease. Again, it is sometimes confounded with embolism, which is due to the sudden plugging up of a blood vessel in the brain. In such cases do not be in a hurry to determine your diagnosis. Ascertain the full history of the case. In cases of embolism examine the heart; make inquiry if he has had rheumatism. In a large majority of cases, if congestion, the symptoms will gradually abate without much *detriment.* If embolism, we will have as a sequela paralysis of right side; if cerebral congestion, no particular side is chosen. There are some signs, however, which serve to form a correct conclusion in a great many cases. For example, in cerebral hemorrhage, conscience is lost, congestion is lost, stertorous in hemorrhage, not so in congestion. You can form no definite conclusion when the symptoms only last a short time. The prognosis is not always unfavorable. The patient must use his brain in a favorable condition, which he will, if he follows advice and treatment. In all cases you should recollect that the *first* important step in the treatment *is to reduce the amount of blood in his brain.*

CASE 1.—Here is a case which is very interesting. You will meet with them quite often, as a rule, therefore you must study them attentively, so that you may not fail to recognize them as they arise. Now, you see this woman; she has a tremulous motion in her limbs; can scarcely control this. I will ask her to carry her hand to her face. Observe, if you please, how it trembles; passive, it remains quiet. This is an important fact. There is a disease in which the hand does not remain quiet in this way. I will ask her to walk; all the muscles tremble. She first observed this tremulous motion after the death of her child, some few years ago; caused from excessive emotion. She has paralysis of right side of face. She cannot close the right eye tightly. Cannot close them alternately. The tremor here preceded the paralysis, and this is also an important fact, as there is another disease in which the paralysis comes before the tremor. She has no dizziness, no pain in the head. Slight numbness in the right hand, with loss of sensibility. Observe when she walks how much weaker the right side is in comparison with the other. The tremor is also mainly confined to the right side.

Now this may be confounded with three different diseases, viz., multiple cerebral sclerosis, which if it were the case, the tremor would be developed whether she moved her hand or not, or without voluntary motion of any kind. In spinal sclerosis, no tremor. There is, however, another form, multiple cerebral spinal sclerosis, and this is the form which she has. If the disease commences in the spinal cord, the tremor precedes the paralysis; if it takes its origin in the brain, *vice versa.*

Sclerosis means hardening; the brain becomes hardened, multiple, or deceminated; there are nodules of hardened tissue. To give you a familiar illustration, make a brain of putty, and place therein, at intervals, small round substances, marbles, for example; these nodules or spaces give me a fair representation of decimated sclerosis. It here, then, exists as decimated sclerosis; the paralysis came before the tremor. She has had sclerosis beginning in the brain and descending to her spinal cord. In this form, owing to a slow chronic condition, the connective tissue, the neuroma disappears and becomes hard. If you cut through this you find the true brain elements are gone, the result of chronic inflammation.

We pass now to the treatment: and these are difficult cases, as you will discover. In the majority of cases nothing more can be done than to palliate. Where a syphilitic element can be discovered, large doses of potass. iodide will be found beneficial. This is not the case here, therefore, this drug would be useless. Here the disease was produced by violent emotion. What then can be the pathological link. The emotion remained and caused this chronic element. In such cases I have derived great benefit from the chloride of barium, in grain doses, three times daily; she should use this for a long time, and under this influence she may get better.

The actual cautery is productive of good effects. There is good reason to hope that if it were used and repeated every two or three weeks, it might produce a good result. The morbid process in her case is situated in the ganglia at the base of the brain, the pons varolii the starting point.

We will, therefore, place her upon the chloride of barium, one grain three times daily, and touch the nucha with the actual cautery, leaving it on about the fifth part of a second. It must be repeated in two weeks, at which time we will see what progress she has made.

LONG ISLAND COLLEGE HOSPITAL, BROOKLYN.

Reported for the MEDICAL AND SURGICAL REPORTER, by WINFRED WYLIE, M.D., House Physician.

Acute Nephritis.

Oct. 25th, 1878. Johannah Heart, aged 29; nativity, Ireland. Three weeks ago, after exposure to cold while washing, she was taken with a rigor, which was followed by fever, severe pain in region of the kidneys and violent emesis. Patient had an almost constant desire to urinate, but was unable to pass more than a few drops at a time. When admitted to hospital, her face and limbs were badly swollen (œdematous), urine small in quantity, light in color, sp. gr. 1.009. Upon the addition of heat and nitric acid one-half its bulk coagulated. Microscopical examination showed a large quantity of epithelium from the tubules and urinary passages, as well as epithelial and blood casts. Upon physical examination of lungs numerous very fine moist râles were found, showing some œdema of lungs; she also complained of pain in the chest. At 7 P.M. she was given fifteen minims fluid extract jaborandi, to be repeated every hour until she should perspire. Soon after

second dose she began to perspire, which soon became very profuse; at the same time the saliva escaped from the mouth almost continuously; this continued for some hours.

Oct. 26th. Patient feels a great deal better; no râles or pain in the chest. Repeated the same treatment this evening, with like result; also used dry cups over kidneys and lungs.

Oct. 27th. Patient improving; repeated jaborandi, with a like result; continue to cup over kidneys once a day.

Oct. 28th. Stopped the jaborandi; œdema has entirely disappeared.

Oct. 29th. Patient feels perfectly well.

Oct. 30th. Slight œdema in lower extremities. Gave her three fifteen-minim doses of fluid extract jaborandi, with no result except to produce an increased flow of saliva.

Oct. 31st. Repeated the fluid extract jaborandi and increased amount up to sixty minims, but could not produce any perspiration. Examined urine; found it light in color, sp. gr. 1.012, albumen about one-fourth its bulk. She was put upon—

℞. Tr. digitalis, ℥ij
Sol. potassæ citratis, ℥ij
Infusi buchu, q. s. ad ℥iv. M.

Sig.—Take two drachms every two hours.

Nov. 1st. Improving.

Nov. 4th. Rapidly improving. Œdema has entirely disappeared.

Nov. 8th. Examination of urine shows it nearly normal.

Nov. 10th. Discharged, recovered.

Caseous Pneumonia, or Quick Consumption.

Walter Silverspare, aged forty-five. Nativity, Sweden. First mate. November 6th, 1878. Patient has had a cough for some time. About a month ago he was ill in the south, with a fever; while recovering from that he fell overboard, and remained in the water nearly half an hour. The next day he had a cough with slight fever, and for three weeks previous to his admission to the hospital he had been confined to his bed. When admitted he was very weak, pulse very small, weak and rapid, breathing fifty times per minute. Temperature 103°. He was also having involuntary evacuations of bladder and rectum. On examination we found slight dullness over whole of left lung, except at the apex, where it was vesiculo-tympanitic; at same place he had cavernous respiration and gurgles. Submucous râles over both lungs, most marked over the left lower lobe, gradually becoming firmer as we near the apices. Gave him, to bring up his pulse at once, spirits ammoniæ aromat. (thirty minims) hypodermically. For his general condition—

℞. Cinchonidiæ sulph., ℥j
Acid. nitro. mur., ℥ij
Aquæ, q. s. ad ℥iij. M.

Sig.—One drachm every four hours.

And half an ounce of whisky in two ounces of milk every two hours.

Nov. 7th. Râles in left lower lobe are a little larger than they were last evening. Those in the right lung are clearing up slightly. Respirations forty-six per minute. Temperature, 6 A.M., 102°; 7 P.M., 104.

Nov. 8th. Patient about the same. Gave him two and one-half quarts of milk and ten ounces of whisky daily. Temperature, 6 A. M., 102°; 7 P. M., 103½. Gave him, in addition to the above—

℞. Tr. nucis vomicæ, ℥j
Ammoniæ carb., ℥j
Aquæ, q. s. ad ℥iij M.

Sig.—One drachm every three hours.

Nov. 9th. Râles in left lower lobe very much larger. He is failing rapidly. Temperature, 6 A. M., 102¾; 7 P. M., 105°; respirations, sixty-five per minute.

Nov. 10th. Râles in left lower lobe larger; those in right lung are not nearly so numerous, but are larger than when he was admitted. Temperature, 6 A. M., 102°; 7 P. M., 103°.

Nov. 11th, 6 A. M. Temperature, 103°. Died at 11 A. M.

Autopsy.—Disclosed a large cavity in left apex, innumerable cavities throughout both lungs, but more particularly in the left lower lobe; the cavities were from the size of a small pea to that of a small walnut; these cavities were filled with a creamy, puruloid matter. There was also innumerable cheesy deposits throughout both lungs, which had not as yet undergone liquefaction.

Editorial Department

Periscope.

The Use of Chloroform in Labor.

Dr. J. M. Howie, of Liverpool, writes to the *British Medical Journal*:—

There can be little doubt that the indiscriminate use of any anæsthetic during parturition is likely to prove injurious in very many cases. Chloroform certainly both relaxes the uterine fibres and dilates the minute blood-vessels, thereby retarding delivery and increasing the tendency to post-partum hemorrhage. Besides its power to prevent oxidation, it exercises an exhausting influence upon the nervous system. On this account, when I am called to a case of extreme exhaustion, I endeavor to expedite delivery (by forceps or otherwise), as far as possible, without the aid of anæsthetics.

The administration of chloroform "in the usual obstetrical fashion, namely, in small doses during the pains only, and after the commencement of the second stage," I have very seldom practiced during

the last six years, and only in those cases where uterine action has been excessive and rapid. In other patients, I found that it lengthened the labor, increased the tendency to hemorrhage, and, on account of the larger quantity administered, considerably prolonged the period of convalescence. One lady, the wife of a professional man, was so much injured by it as to present symptoms resembling those of puerperal mania. Nevertheless, it cannot be denied that chloroform is an immense boon to large numbers of lying-in women; but in the majority of such instances its administration ought to accompany the use of the forceps. The class of women (increasing year by year) in which such treatment ought to be resorted to early, comprises those whose heart is weak, and, therefore, liable to be injured by the intense strain produced by muscular effort. In such women, ergot is exceedingly injurious, for it increases the blood-pressure—(*a*) by promoting excessive uterine contraction, and (*b*) by contracting the minute blood vessels. Chloroform, on the other hand, lessens blood pressure by inhibiting uterine contraction and dilating the minute blood vessels. Then the early application of the forceps prevents such a strain upon the weak heart and vessels as would be likely to prove injurious.

I cannot but think that it would be a safe rule only to administer chloroform in those cases where uterine action is excessive, or where some artificial means of hastening delivery is contemplated, at an early period of the second stage. Since I adopted this rule, six years ago, I have had many hundreds of obstetric cases, and have not had a single case of troublesome post-partum hemorrhage in my own practice.

The Surgical Treatment of Lupus.

In an article by M. Hillairet, quoted in the London *Medical Record*, the writer says—

It was Veiel who first introduced acupuncture. The method consists in pricking the surface of the lupus with needles, either in bundles, or fixed in the same handle, but separated from one another by some millimeters. These needles, before being used, should be heated to a red color. This plan is, however, at the present time much less employed than the scraper and linear scarification. Volkmann invented the scraper, and published his proceeding in 1870. It consists in scratching the surface of the lupus with curettes of different shapes, but generally of small dimensions. It is necessary, in order to aid the action of the instrument, to raise up all the lupoid tissue, and one may be satisfied with the result when the curette comes upon more resisting parts; this is healthy tissue; the operator should then stop. It is generally necessary to repeat the operation one or more times a month, until the healing of the lupus is complete. Volkmann and Hebra both advise cauterization of the scraped surfaces with nitrate of silver. This method of Volkmann's gives very good results, but it is not applicable to all cases of lupus, and I more often employ linear scarification. To practice this, a needle, slightly flattened, with sharp edges, may be used. Or, following the example of Balmanno Squire, a scarificator with numerous blades, which he has expressly constructed, may be used. Personally, I find the needles most easy to manage, and I make the linear incisions separated by a few millimeters. I place my incisions in such a way that some are perpendicular to the others, and I repeat the operation one or more times a month, until the lupus is well. I have obtained by this practice very good results, and I believe that this method is destined to be of great service. It offers one inconvenience; that is, it gives rise to hemorrhage, which may be very abundant, and in patients with frail constitutions this may be injurious. I should say a great deal of this loss of blood may be avoided by applying to the lupoid surfaces, before operating, some convenient anæsthetic, and afterward by the immediate use of perchloride of iron; this may be simply done by means of a piece of blotting paper, as recommended by Balmanno Squire. Another recommendation of linear scarification is, that it can be more easily and more promptly repeated than cauterization.

Copaiba in Cirrhosis and Jaundice.

The value of copaiba as a diuretic and cholagogue is not sufficiently appreciated. The following case, reported in the *British Medical Journal*, by Dr. B. J. Massiah, illustrates it—

W. D., aged 37, a clerk, was a spirit drinker for four years, seven years ago; and during the last four years and a half has had three prolonged and painful attacks of jaundice, with ascites and œdema of the lower limbs. On admission, three months ago, he was tawny, thin, and rather weak. He complained of constant pain in the umbilical and lumbar regions. His fluctuating abdomen measured thirty-four inches in circumference, and the vertical hepatic dullness in the nipple-line was three inches. The urine was scanty, bilious, and exalbuminous.

During the first month he took bitartrate of potash and compound jalap powder; and the abdomen increased two inches, the urine remaining scanty. Then, under a scruple of copaiba thrice daily, it rose on successive days, from one pint in twenty-four hours to three, four and five pints; while the ascites began to subside. Once, for a fortnight, he took half a drachm of tincture of belladonna thrice daily, for the abdominal pain, and the quantity of urine fell below two pints daily. Since then, he has returned to the copaiba, and his urine has averaged three or four pints daily. The abdomen now measures thirty-three inches in circumference, and his general health is much improved.

On Albuminous Substances in the Urine.

An interesting paper on the albuminous substances which occur in the urine in albuminuria has been contributed to *St. Bartholomew's Hospital Reports*, for 1877, by Dr. Lauder Brunton and Mr. D'Arcy Power. In it they deal with the subject of differences in the coagulating point of albumen (or album*in*, as it should be more correctly written, to distinguish egg-albumen from the serum-albumin of the blood) in the urine of Bright's disease, and also with the question whether there are other forms of albumin met with in it besides ordinary serum-albumin. We shall only give results here, and leave our readers to refer to the original paper

for details. In answer to the question, does the coagulating point of the albumin in albuminuria vary much? they found that it ranged from 144° to 180° Fahr. in five cases of different forms of "Bright's disease," and they showed that this difference partly depends, as was previously known, on the acidity and the amount of neutral salts in the urine, which lower the coagulating point, and partly on the amount of urea present, which raises it. The effects of the urea is so great that when it reaches 25 per cent. of the mixed solutions of serum-albumin and urea, coagulation is entirely prevented. On the other hand, the coagulating point is lowered by uric acid. Dilution of albuminous urine with water, to a specific gravity of 1.005, lowers the coagulating point, but does not render it constant. The differences in the coagulating point appear also to be partly due to the existence in the urine not only of serum-albumin, but also of the products of pancreatic digestion, which coagulate at higher temperatures the further the process of digestion has advanced, though their coagulating point is much lower than that of serum-albumin, about 160° Fahr. The effect of food on the coagulating point was experimented on in several cases, and was found generally to lower it, though not invariably. The coagulating point is not sufficiently constant in different diseases attended with albuminuria to infallibly indicate the nature of each disease; but the authors remark that "the great differences between the urine of a case of waxy kidney, in which the coagulating point was about 162° Fahr., and one of chronic Bright's disease, where it was 132° Fahr., cannot be regarded as unimportant."

Ergotine in Acute Ophthalmia.

Dr. Planat, of Nice, states, in the *Journal de Therapeutique*, that he has found ergotine act with efficacy and promptitude in proportion as oculo-palpebral phlegmasiæ are simply inflammatory. In blepharo-conjunctivitis the improvement is first observed in the conjunctiva; and in keratitis, although still very active, it is a degree less so than in the more superficial affections. It is also of great service in iritis, rapidly subduing the acute manifestations and preventing their extension to the external membranes of the eye. When these last are the seat of a chronic fluxion dependent on a scrofulous or dartrous diathesis, ergotine, without influencing the constitutional affection, acts none the less efficiently on the inflammatory element—a fact of importance, as by generally preserving the eye from plastic deposits, corneal ulcers, and consecutive staphylomas, it allows of the treatment for the diathesis being more promptly put into force. The formula which Dr. Planat recommends is from one to one and a half gramme of ergotine in twenty of glycerine or rose water, of which from eight to ten drops are to be inserted in the eye every two hours. Where there is violent inflammation of the eyelids or distention of the conjunctiva, a rag wetted in this mixture should be left on the parts for some hours. In general, two or three days suffice for the subdual of the most intense blepharo-conjunctivitis. Dr. Planat has employed the ergotine in this way, with invariable success, for several years past.

Differences Between Zymotic and Septic Poisons.

These are well set forth in a recent lecture by Dr. Reginald Southey, of London. The zymotic contagium, be this what it may—some modified blood or soluble animal cell, some fungus or low vegetable germ, zoospore or microspore—requires cooking or hatching for a certain period of time in the individual who has received it, before any apparent change or reaction can succeed. Some period of incubation must elapse, during which the poison infects or impregnates the whole system, before this manifests its presence by symptoms; but when the reaction is manifested, it is general at once throughout the body. So soon as the poison begins to work its changes, indefinite symptoms may arise, such as are common to all grave blood changes, and are non-appointing. You will have often heard me say at the bedside that a patient appears to me suffering from a general reaction to some one of the exanthemata contagia, which one I cannot tell until the rash comes out.

Three stages may thus be distinguished in the history of zymotic poisoning. (*a*) A dormant stage without symptoms; (*b*) an incubating stage with general symptoms; (*c*) a specific stage with special appointing symptoms.

No such separate stages can, I think, be observed in disease produced by septic poison. It is true that the poison of erysipelas, septicæmia, hydrophobia, sometimes lies latent in the body into which it has been inserted, but this latent period is non-essential; nay, rather it may be regarded as accidental, for from the first instant the poison reaches vulnerable surfaces, the reaction commences, the body is forthwith infected. A late or deferred reaction is apparently only due to encapsulation of the poison at the poison wound, its separation really from the body by a limitation barrier. Within such a capsule the poison germs lie like seeds inside a seed-case. Furthermore, in septic disease the reaction process first manifests itself at the point where the virus is inserted, and spreads from this focus, gathering force as it goes. There is no incubating stage—the specific symptoms follow at once. We perceive next that the quantity of virus or poison inserted makes absolutely no difference to the total sum of the reaction or specific symptoms provoked in the instance of zymotic disease, whereas both the form and quantity of the septic poison materially influence the course and gravity of the reaction induced. Finally, in both septic and zymotic disease we perceive a conflict between the stability of the poison entity and the stability of the person poisoned, but a conflict with this remarkably different issue, that the zymotic poison always vanquishes the body and leaves its stamp or mark upon it, whereas the septic poison is either vanquished and cast out, or obtains predominance, corrupts and destroys the individual.

Vomiting After Operations.

Prof. Verneuil, recently made some observations at the Société de Chirurgie on the occurrence of obstinate vomiting after operations and wounds. He did not allude to vomiting that might be dependent on eating too soon afterward, impure chloroform, regurgitation of the

saliva, etc. In the cases he has in view, the patients vomit saliva, bile, or ingested substances, without apparent cause; they become fatigued and anxious, and dare not eat or drink; while the efforts in vomiting sometimes induce oozing of blood from the wound. Prof. Verneuil meets with three or four such cases in his wards annually. This form of vomiting seems especially to occur in "alcoholics," as also in subjects of disease of the liver and kidneys, and in persons of bad digestion. The prognosis in these cases is not usually very serious, though sometimes it may cause uneasiness. Ice has been given with success, and in some patients morphia injections arrest the vomiting. It is of importance that the patients should be nourished; but wine, as well as milk, is badly tolerated. What succeeds best is ice, mucilaged and alcoholized water and pepsine, in the dose of fifteen grains morning and evening. Prof. Verneuil's object is to show that the cause of obstinate vomiting after operations is an anterior dyspeptic condition, and that frequently there are alterations in the internal organs, chloroform only playing quite a secondary part in the production of the vomiting.

Reviews and Book Notices.

NOTES ON CURRENT MEDICAL LITERATURE.

——Dr. J. W. Sherfy, late an officer of our Navy, now of London, has republished from the *Temperance Record* an article on the antagonism of alcohol and diphtheria. It approves and endorses Dr. Chapman's well-known views on this subject.

——The *American Naturalist*, for December, contains a well-written article on the hygienic influence of plants, by Dr. J. M. Anders. It is the best summary of the subject we have seen.

——In No. 9 of Schmidt's *Jahrbücher*, Dr. B. Segnitz, of New York, has a communication on idiopathic asthma, principally concerning its history. He does not speak sanguinely of treatment. Moderately large doses of camphor have proved the most effectual in his hands.

——The report to the Pennsylvania State Medical Society of the Philadelphia County Medical Society, on Epidemics and Meteorology, by the Chairman, Dr. Benjamin Lee, makes a pamphlet of thirty pages. It is a carefully prepared document.

——Dr. Thad. M. Stevens, of Indianapolis, has published an article of four pages on "The History of and Necessity for Medical Legislation in Indiana," which it is to be hoped will stir up the profession of that State to active work.

——The Annual Report of the Columbia Hospital for Women, and Lying-in Asylum, has reached us. It will be remembered by many that an anonymous correspondent of a Louisville journal preferred numerous and grave charges against the surgeon in charge, and they were also filed in the Department of the Interior. A committee of eight physicians were appointed to investigate them, and it is but just to quote the following extract from their report:—

"In carefully reviewing the testimony adduced, a work absolutely necessary in order to arrive at the result desired by the Board of Directors, the Advisory Board have had the conviction forced upon them that, not only are their conclusions, as previously given, entirely just in every particular, but that Dr. Murphy is entitled to the highest commendation for the fidelity and conscientious discharge of his duty; and, further, the Advisory Board feel that they would have but illy performed their task should they fail to express their appreciation of the professional skill of Dr. Murphy, and their entire confidence in his ability to meet any emergency that may arise in an institution of this kind."

——A thoughtful and able article on the prophylaxis of puerperal convulsions appears in a reprint from the Toledo *Medical and Surgical Journal*, by Dr. E. S. Dunster, Professor of midwifery at Ann Arbor. His opinion of the practicability of prophylaxis may be judged from this extract, toward the close of his paper: "I cannot close this paper without again expressing the belief that medical art now furnishes a certain method of averting, in very many if not the large majority of cases, the dangers consequent upon the albuminuria of pregnancy, and that it should be our constant aim to early recognize the condition, so that the treatment may be applied in season."

——The Annual Report of the Surgeon General United States Navy, gives the usual statistics and urges upon Congress the importance of providing for the publication of the Index Catalogue, which it is to be hoped will promptly be done. The Surgeon General adds, "Of its great utility, not only to the medical profession, but through that profession to the people at large, there can be no doubt, and there are special reasons why it should be placed beyond the reach of casualty, and made accessible to physicians with as little delay as possible." In regard to the

present medical staff he says, "It has not been found practicable to fill existing vacancies, but seven candidates having been found qualified for appointment as Assistant Surgeons in the past ten months. Even were the Corps filled to its maximum, the present disposition and occupation of troops creates a necessity for additional medical aid, and it has been found expedient, economical, and in every instance absolutely necessary, to employ physicians under contract to meet such demands; such employment terminates when the emergency ceases."

——Dr. H. M. Paine, of Albany, has favored us with several pamphlets, etc., relating to the "advanced" position of modern homœopathy, the registration of disease, etc. To discover the follies of "dynamization" does not, we confess, seem a wonderful thing; but we do feel surprise that a gentleman of Dr. Paine's real thoughtfulness and ability should continue to believe as much nonsense as he yet does.

——Dr. George M. Beard has done a good thing by exposing the palpable frauds of the so-called "Mollie Fancher Case," the Brooklyn seeress, who has been befooling the public, and even several respectable members of the profession, for years. Dr. Beard sufficiently exposes the humbug by stating that the seeress and her medical advisers decline the test of a properly guarded scientific examination. *Verb. sat. sap.*

BOOK NOTICES.

Differential Diagnosis: A Manual of the Comparative Semeiology of the more Important Diseases. By F. De Havilland Hall, M.D., Assistant Physician to the Westminster Hospital, London. American edition, with extensive additions. Philadelphia, D. G. Brinton, 115 South Seventh street. 1 vol., 8vo, cloth, pp. 205. Price $2.00.

The recognition of disease is the indispensable requisite to successful treatment; hence, the great attention which is paid to diagnosis by the most eminent medical teachers. In the work before us, Dr. Hall, himself an able and successful instructor in one of the London medical schools, presents a series of tables setting forth the differential diagnosis of the more common diseases. The *British Medical Journal*, in a review of the work, says: "These tables do not partake of the objectionable type of books brought out by "grinders;" they are invaluable aids by the bedside, enabling the practitioner and student readily to compare signs met with in disease with those observed in health."

The American editor has expanded the plan of Dr. Hall, while adhering to its excellent method, to include several groups of diseases not appearing in the English work. He has, moreover, devoted especial attention to collating and presenting the *early* signs of disease; the *pathognomonic* symptoms of disease, and the *peculiarities* of disease in the United States.

Thus we have three pages filled with the symptoms of exanthematous fevers which precede the eruption and enable the physician to predict its form and the nature of the disease. For the diagnosis of incipient phthisis, sixteen different signs other than those supplied by the usual rules of auscultation and percussion, are enumerated. Three pages are assigned to the early signs of Bright's disease. And the prodromata of that insidious and terrible disease, general paralysis, are carefully drawn.

The scope of the work takes in both general and local diseases. Under the former there are chapters on fevers and diseases of the blood; under the latter are diseases of the nervous system, of the respiratory system, of the circulatory system, of the digestive system and of the urinary system. While, of course, various diseases of rare occurrence and slight importance are omitted, it will be found that almost all which the practitioner meets with, and which are liable to be confounded, are represented. The tabular and comparative arrangement adopted offers peculiar facilities for presenting a great deal of matter in a singularly compact form. Hence it is that in a convenient volume of but little over two hundred pages a vast amount of information is condensed.

We also observe that the latest contributions to the subject have been levied upon, and though preference is avowedly given to American authors for the description of diseases, the important works of the latest German, French and English authors are freely consulted.

The paper, print and binding are all of the best, and, both in matter and form, the work will scarcely fail to please all who make use of it.

Beiträge Zur Entwickelungsgeschichte des Menschen, des Säugethiers und des Vogels. Von Fanny Zeiller g. Elser.

Contributions to the History of the Development of Man, Mammals and Birds. By Fanny Zeiller, Honorary Member of the Free German Hochstift, Frankfort on the Main. J. G. Weiss, Munich.

In this work, published at Munich last year, we have a noteworthy contribution to the science

of embryology, by one of those erudite women who, within the past few years, have so triumphantly vindicated the aptitude of their sex for the severest studies. The work is in the form of an Atlas, containing ten large full-page plates, exhibiting in ninety-seven different figures, drawn, with scrupulous fidelity, from nature, the stages of development of the human embryo, illustrated by numerous comparative examples of its growth in other mammals and in birds. The technical perfection of the work is apparent on the most superficial examination, and that it is calculated to give very faithful representations all familiar with such subjects will readily recognize.

But the criticism which will be at once pronounced upon the book is, that it is what the Germans call *tendenziös;* in other words, the authoress has undertaken this enormous labor to support certain views of a theoretical character, rather than simply to represent, with the cold indifference of pure science, the occurrences that transpire in that most secret arcanum of nature, the fertilized ovum. This she frankly avows in the introductory remarks.

Our readers are, no doubt, aware that the adaptation of means to end, the enforced relation of cause to effect, and the evidence of design and purpose, are jointly and severally denied and derided by advanced scientific thinkers, and nowhere more boldly and absolutely than in Germany. The unity of life in the individual, and the indissoluble communism of the vital acts, from the first segmentation of the yolk to the last gasp of death, is not admitted. It is in the defence and illustration of this rejected oneness of the individual life, that Mrs. Zeiller presents the rich store of facts she has accumulated; but in doing so, has taken pains to re-examine, and often to correct, the statements regarding the development of the embryo, as given in the leading text-books of Kölliker, Bischoff, Häkel, and others.

Whether we concede or not that she has established the underlying principle for which she contends—and on this point we do not consider that either ourselves or this generation, is capable of pronouncing the final word—no one can deny her the highest credit for carrying out so laborious an investigation with such excellent results.

Transactions of the Minnesota State Medical Society, 1878. pp. 186.

In these *Transactions* the reports of the committees and the discussions on them are given at considerable, at times unnecessary, length, as many pages could have been abbreviated one-half without loss to any one. The Report on Surgery is especially full, and numerous cases are cited. The leading essays are by Dr. Franklin Staples, on "Fracture of the Femur;" Dr. W. W. Mayo, on "Purpura Hemorrhagica;" and by Dr. J. B. McGaughey, on "Venereal Diseases." They are all three excellent papers, the one first mentioned particularly showing a thorough study of the subject.

The Principles and Practice of Surgery. By John Ashhurst, Jr., M.D. Second edition. Enlarged and thoroughly revised. With 542 illustrations. Philadelphia, H C. Lea, 1878. pp. 1040.

The science of surgery has grown so greatly that even a volume of more than a thousand pages, such as the one before us, demands on the part of the author the most judicious compression and selection to present its various branches with adequate fullness. This Dr. Ashhurst has felt, and has at once acknowledged that in some directions, as in diseases of the eye and the ear, any attempt at completeness is out of the question. By this discretion he has allowed himself more room to discuss those general principles and common accidents and diseases, a knowledge of which must make a part of the education, not merely of the specialist, but of every practitioner of medicine.

While our space does not allow us to enter at length in an analysis of his work, the several articles we have perused in it have convinced us that it will bear very favorable comparison with any other. This, too, is shown by the fact that a second edition has been called for. The author has taken the opportunity to give the whole a thorough revision, and made a large number of important additions.

A Manual of Physical Diagnosis. By Francis Delafield, M.D., and Charles F. Stillman, M.D. New York, Wm. Wood & Co., 1878. 4to, pp. 30.

An interleaved quarto of thirty pages, rehearsing the known and established rules of diagnosis of thoracic diseases, in a simple form, readily comprehensible by junior students; this will, no doubt, be found by such a very convenient work of instruction. Appended to the manual is a colored superimposed plate, giving the location of the contents of the thorax and abdomen; a once very popular plan of conveying information which has been little resorted to of late years.

THE

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A BATTLE OF THE GIANTS OVER EVOLUTION.

Those great lights of science, Professor RUDOLPH VIRCHOW, of Berlin, and Professor HAECKEL, of Jena, have been indulging in a set-to which has been making the scientific atmosphere of Germany sulphureous with the smoke of the combat.

The veteran Berlin pathologist has not often been accused of religious bigotry; indeed, he has usually been held up by the Particularist and Romish press as a frightful exemple of the scientific atheist and modern infidel. But his time has come, and HAECKEL now points him out as a religious fanatic! The duel arose in this wise:—

At the last meeting of the German Association for the Advancement of Science, Professor HAECKEL delivered an able address, in which the theory of the evolution of all existing organism from a single organic cell had been advanced as an almost self-evident conclusion, and as sufficiently established to permit it to be taught in every school. A second and scarcely less daring proposition had been laid down by NAEGELE, to the effect that the province of mind should not only be extended from animals to plants, but that we should finally pass over from the organic to the inorganic world with our conceptions of the nature of mental operations.

To these propositions Professor VIRCHOW entered a powerfully written protest. He pointed out that the theory of evolution is so completely at variance with views that have long been generally accepted that it constitutes a sort of new religion, and must be imported as a whole into the schools; for, even if not ordered to be introduced, the schoolmaster who accepted it would necessarily have his mind so tinged with the doctrine that it would influence all his teaching and force its own way. But the evolution theory is still on its trial; it has been extended far beyond the limits in which it was bounded by the caution of its originator, and on a certain basis of solid fact a great superstructure of hypothesis has been raised. So with Professor VIRCHOW'S own well-known formula, that every cell is derived from a cell; there have not been wanting others who not merely extended this statement in the organic world, beyond the bounds to which he had restricted it, but transferred it beyond the bounds of organic life—as holding good universally; and he states that he has received the most extraordinary communications from America and Europe, in which the whole sciences of astronomy and geology were based on the cell theory. Such hypotheses are clearly beyond and outside of the educational system. They may be suggestive and useful to the Professor, but they are utterly unadapted and harmful to the student. For him and for the general public the distinction between what is absolute fact and what is only presumption should be sharply defined and clearly recognized. The teacher should teach that alone which he knows to be true and irrefragable; for it must not be forgotten that, when the public see a doctrine which has been presented to them as established and claiming universal acceptance proved to be faulty, many are led to lose faith in science, and to reproach it with insincerity and instability.

These utterances were eagerly seized upon by the religious press of Germany, and published in a

more or less complete form, as "the recantation of the great materialist."

But HAECKEL, who seems to be like one of our own shining medical lights, "a terrible fellow in a controversy," lost no time in polishing his weapon and rushing forth. His pamphlet, *Freie Wissenschaft und freie Lehre*, is full of the sharpest points. He claims that VIRCHOW is ignorant of the common facts of science, that he is getting old and weak in the head, and that he is dabbling too much in politics to keep up with medicine. As to the evolution of species from each other, he quotes numbers of undoubted examples. He, HAECKEL, has himself shown some, in his monograph on the "Calcareous Sponges," his investigations leading him to the conclusion that, according to the taste of the observer, 3 or 21, or 111 or 289, or 591 species may be made, indicating in no uncertain manner the probability of the transformation of species. All this and much more, as the evidence derived from embryogeny, and from the presence of rudimentary organs, VIRCHOW either ignores or passes lightly over. Indeed, VIRCHOW, he says, is not now qualified to form an opinion upon such points, since his labors of late years have been political rather than biological. Just such a deviation from the paths of science was witnessed in the case of ERNST VON BAER, and with a similar limitation of the mental horizon. Both began life as great reformers of the then prevailing doctrines, both failed to bring their knowledge up to the times, and "hence the authority of both in their later life fell away." "VIRCHOW does not know how ignorant of morphology he is."

The controversy, as it stands, may be said to be a pretty one; and we shall look with interest for VIRCHOW's reply; meanwhile he has dropped politics, avowedly, to address himself with all his energy to science.

We are very far from believing that his day of active thought has passed away. It is an imputation often laid at the doors of men advanced in life, that their powers are failing, when such is by no means the case. We shall be surprised if VIRCHOW does not reply in a manner to show that his eye is not dim nor his strength abated.

NOTES AND COMMENTS.

The Use of the Actual Cautery.

Dr. Agnew, in his "Surgery" (p. 76), characterizes the actual cautery as "a rude weapon of torture," an expression that we read with surprise, and cannot but believe is erroneous and unjust. It is an indispensable and most valuable implement at times. That eminent surgeon, Mr. Henry Lee, of Guys Hospital, London, has an article in a late number of the *Lancet*, on the value of the hot iron as a styptic, etc. We allow ourselves two quotations from it:—

"Before the introduction of anæsthesia into surgical practice, the use of the actual cautery was justly regarded as a barbarous and cruel proceeding. The traditions of one age descend to the next, and the application of a hot iron to the body is still regarded by the public, and even by some members of our profession, as a thing not to be tolerated in scientific surgery. All objections to the use of the actual cautery vanish, however, so soon as it can be said that it can be used without giving pain. * * *

"The actual cautery has the great advantage of closing the veins as well as the arteries, and thus removes one of the gravest sources of anxiety to the surgeon, inasmuch as the great danger in surgical operations arises from the absorption of septic agents through unclosed veins. The ligature of a vein, as is well known, is not unattended with risk, for the obvious reason that during the time that the ligature is separating a certain amount of suppuration necessarily takes place, and the products of that action may give rise to septic absorption. The actual cautery, therefore, possesses a great advantage over the ligature, as far as the veins are concerned. The danger of blood infection, though in a much less degree, obtains when an artery is tied. In a vein the current of blood is toward the centre of the circulation, and in an artery from it. When mischief arises from the cause mentioned, after an injury to an artery, the effects are usually seen in the peripheral circulation. When venous absorption takes place, the results are generally manifested in the central organs."

We also note that in the *Bulletin de Therapeutique*, October 15th, Dr. Trudeau states that in Dr. Labbée's practice most excellent effects are obtained from the employment of the actual cautery in the treatment of diffused phlegmon. The treatment consists in applying numerous and deep cauterizations in the incisions which have been practiced in the phlegmon. No case should be despaired of until this treatment has been applied,

an abatement of all the severe symptoms usually occurring, the pain and fever very rapidly disappearing. Usually the cure is complete.

Mortality from Alcohol and other Causes.

Dr. Thomas Morton, of London, has presented, in the *Medical Press and Circular*, some remarkable statistics of the comparative mortality from alcoholism and other diseases, in England and Wales. He gives the following list of the causes of death, arranged in the order of their fatality.

DISEASE.	TOTAL DEATHS.	DEATHS FROM 25–75.
Bronchitis	54,055	21,603
Phthisis	51,775	33,374
Heart Diseases	30,481	23,878
Atrophy and Debility	14,364	3,413
Old Age	25,461	1,919
Convulsions	25,408	52
Pneumonia	24,492	8,828
Diarrhœa	21,781	1,833
Apoplexy	13,215	9,558
Cancer	11,604	10,719
Paralysis	11,994	—

The deaths due directly or indirectly to alcohol, confining it to the period of life from twenty-five to seventy-five years, he carefully calculates at the alarming total of 39,287 !

The Development of the Graafian Follicles During Pregnancy.

Contrary to the opinion then prevailing, and contrary to that now generally taught (for example, Barnes' "Diseases of Women," p. 28), the late venerable Professor of Midwifery at the Jefferson Medical College, Dr. Charles D. Meigs, used to teach that the development of the Graafian follicles continued uninterruptedly during pregnancy. This opinion has been confirmed by some researches and post-mortems made by Dr. Slaviansky, which we find in the *Med. Centralzeitung*, Oct. 30th. A woman of twenty-four years, who died suddenly in the third month of pregnancy, displayed follicles on the point of bursting, and recent corpora lutea. This may be said to decide a question of considerable physiological interest.

The Physiological Action of Coffee.

Prof. Binz has been making some new experiments on this subject. He found that very large doses not only raised the temperature, but caused death by convulsions; but the latter could be averted by artificial respiration. Moderate doses of caffein raised the blood-pressure, the effect being the same whether the pneumogastric nerves are divided or not. Professor Binz has also examined the effect of caffeoon, the name given by Boutron and Frémy to the volatile products developed in the coffee-bean by roasting, and he finds that it acts, like caffein in moderate doses, as a stimulant to the brain, the heart, the respiration, and the heat-producing apparatus. He agrees with Hoppe-Seyler and Voit, that an ordinary infusion of coffee slightly increases rather than diminishes tissue-change. In any case, the influence it exerts in this direction is very trifling. The potassium salts contained in coffee are probably of no physiological importance.

The Treatment of Sprains.

Mr. Dacre Fox, an English surgeon to a large railway company, who has had considerable experience of this form of injury, says that in the more severe cases he finds that after a few days of fomentation the best treatment is regulated pressure by means of carefully adjusted pads and large plasters of a special shape, varying according to the particular joint involved. By this plan he feels sure that it is possible to control the effusions into the sheaths of the tendons and adjacent structures, to lessen the pain, and to shorten the duration of treatment.

Solubility of Chloral in Fatty Bodies.

M. Catillon, in a communication to the Société de Thérapeutique, observed that the ready solubility of chloral in considerable proportions in fatty substances is not generally known, and may often prove of great utility in practice. One part of the hydrate is soluble in two of oil. The formula which he recommends is chloral 6 and oil of sweet almonds 30 parts; or chloral 6, lard 27, wax 3 parts. On the same principle, we may make plasters, bougies or suppositories according to the following formula: chloral 1, white wax 2, and butter of cacao 2½ parts.

The Pathology of Diphtheria.

It is justly remarked by a writer in an English contemporary that the researches into the intimate pathology of diphtheria have as yet been to a large extent abortive. Many observers, such as Oertel, Letzerich, and Nassiloff, have asserted the constant presence of a specific growth of a lowly organism, of fungoid or bacteroid character, but their observations are mutually conflicting and inconsistent, and have been contradicted by equally skilled observers. But if in any of the specific contagious diseases we may anticipate the final discovery of an independent growing organism, we may perhaps look for it with more hope of success in diphtheria than in any other, seeing what a strong vitality the contagion displays under suitable conditions.

CORRESPONDENCE.

The Contagion of Yellow Fever.

ED. MED. AND SURG. REPORTER:—

I notice in REPORTER, November 30th, an article on yellow fever, reported by G. L. Wilkins, M D., which contains the opinions of various physicians in regard to its origin, mode of conveyance to the human system, etc., whether by water or air, etc. It seems to me that it is a very plausible theory to believe that both water and air are the means through which the poison is carried into the system; therefore it seems to me to be rather a useless controversy to lay the cause of its conveyance on either the one or the other of nature's products. I fully coincide with Dr. J. S. Lynch in his views as to the origin and non-contagiousness of the yellow fever. If the fever is carried into the system by water, and not air, why is it that so many escape the infection who remain out of the city at night, go in every day, drink the water, and yet remain free from the disorder, when most of those who remain in the town at night are taken down?. Surely, this seems to show that water is not the only means by which the poison enters the system. In Savannah the above facts were the case as a rule.

Dr. Evans believes yellow fever and bilious remittent fever to be one and the same disease. In this I beg leave to differ, for the one generally confines itself to towns or places which have bad air, etc., and seems to require for its propagation, the presence of a certain degree of heat for a stated time, and the conditions of moisture and unsanitary conditions, while the other is endemic to the country, where pure air abounds, and occurs to the residents year after year. Did any one ever know the yellow fever to spread through a farm house located in a perfectly pure atmosphere? The symptoms are certainly not alike in every respect, though the autopsies may be. I grant, if one takes up a treatise on each affection, it is difficult to see the difference between the two diseases; but let one see both infections, and I think he can tell the difference. One does not observe, as a general thing, that peculiar bloodshot look about the eyes, nor, as I observed in the Savannah Hospital, that whiteness of tongue, in bilious fever, as in the other disorder; nor have I seen in Florida that tendency to suppression of urine, or hemorrhagic diathesis, so common in yellow fever, prevail in bilious fever. I don't say that hemorrhages, etc., may not be present in bilious fever sometimes, but I mean as a general thing.

In looking over my notes of cases of yellow fever, I find that in Savannah the pulse and temperature were nearer together than is common in bilious fever. In not one do I find the pulse to rise to 100, but the temperature ranges from 102$\frac{5}{10}$ to 104$\frac{1}{5}$. The tongue in bilious fever is almost always coated with a yellowish fur; in yellow fever, white. Is not the pulse much higher in bilious fever than in yellow fever, and do we find the heat of body and pulse so near together in bilious fever? It does require some discrimination to decide between the disorders where both prevail, and should yellow fever and remittent prevail in the same place in Florida, it would be hard to diagnose the one from the other, unless the practitioner had seen both, as I have. I will give a short report of two bad cases, one yellow fever, the other bilious remittent.

Yellow Fever.—T. G., a native of Ireland, admitted to hospital in Savannah, September 19th, 1876; fever high; pain in epigastrium, head and legs; eyes suffused and congested. Treatment: Blister to stomach, quinine in large doses, bath. Remission followed by vomiting, suppression of urine, not satisfactory; violent delirium; had to be tied down; black vomit; death. Post-mortem. Adipose tissue abundant; muscles very red; liver partly boxwood, fatty degeneration of, engorged; stomach congested and black vomit visible in small and large intestines, which were congested; unhealthy bile and mucus; kidneys congested; spleen normal size, but exceedingly rotten and soft. I give you the report as it was taken at hospital by myself and the doctor in charge. I assisted in the autopsy.

Bilious Fever.—Mr. P. Pulse 108; tongue foul; pain in back, legs and head; stomach tender and nausea; eyes slightly yellow; urine scanty; bowels open. I regret that I have not the temperature in either case, but the above report will show a similarity in the two affections, but also a slight difference between the yellow fever case quoted and the rest, in general. The bilious case recovered, and it was not so bad as the other one. We used various remedies at the hospital, and lost about one-fourth of the patients.

In Florida the higher lands seem to be more subject to fever than the lower; wet places more free than the dry lands, where the sun soon dries the ground and enables the microcosm to float in the air. I don't see why one place may not have pure air and the one next foul air; that one may be sick in one room, from bad air, and the next person in an adjoining room be free, where pure air may abound. As in a case of carbonic acid poisoning. Again, in some parts of Florida the water they drink seems to be poisonous; to favor sickness; so we may see that both air and water may convey a poison. At this place the water is good, yet we have fever, which I think is from air poisoning, while in Marion county the water is bad, and may seem to cause sickness.

As to contagion, I agree with Surgeon Woodworth. I don't believe in it, though I think the germs may be carried by fomites, and not capable of self-multiplication in the human body. In reply to Dr. Nowlin, I would say that it may not depend upon the increase of germs in the body as to whether the disease is violent or not, but on the amount of poison one takes into the system, as in intermittent and remittent fever. I think the greater the amount taken into the system the greater the violence of the attack. The bed clothes may become infected, not from the body, but by the heat and filth which must of necessity be generated by reason of the close confinement of the patient to bed, allowing no air to reach the body, nor can the sick person be washed thoroughly. All this must tend to the development of germs, not from the person, but on account of favorable conditions being present for harboring poison when present in air; heat and filth conditions favorable for propagation of disease when the poison is present; therefore, may the germs be

carried by fomites to places unhealthy and filthy, and produce an epidemic. And why not the fever germs travel in air from place to place, as do the locusts (fasten upon all green things), wherever they a fit place find. If the fever was communicable from person to person, why did not I, who devoted time to fever wards, take the "contagion?" I helped give baths and medicines, and paid particular attention to the fever patients; or the nurse who was among them constantly, an Englishman, too! (I say Englishman, because it is supposed that strangers, or those from higher climes, are more liable than those to "the manor born.") I did not stay in Savannah at night; I went into the city, from a pure atmosphere, drank of the water in town. I say, if it had been contagious, why did we not take the yellow fever? I don't believe in contagion, but do in infection, and agree with Dr. Lynch in his views, and would advise having quarantine, by all means; the exclusion of fomites from a city, and strict attention to the sanitary conditions of a city.

Respectfully, J. G. BULLOCH, M.D.
Morrison's Mills, Fla.

Pathology of Hysterical Cough.

ED. MED. AND SURG. REPORTER:—

An article in No. 25, volume XXXIX, on "The Importance of Medical Observation in Rural Districts," has encouraged me to reply to an article in No. 20, same volume, by Dr. Risel, of Messeburg, on "The Management of Hysteria." In reference to the treatment of the case quoted, where he chloroforms a patient for fourteen days, to quell a "violent cough," hysterical or nervous in character, I shall not enter into any discussion of the cause of such symptoms, whether they originate from genital disturbances or not, but will quote three cases, and leave you to judge whether his theory and practice are the best or not. Though coming from a learned professor and a foreign land, I believe he misses the mark very widely.

CASE 1.—Mrs. J. S., aged thirty-four, hysterical, suffering from uterine polypus, was taken with violent cough, and for ten days I could get nothing to alleviate it a particle; finally, in examining the spine, I discovered that pressing on the fourth and fifth dorsal vertebra increased the cough. I ordered a blister to the spot, which remained twelve hours, and the cough vanished completely. I subsequently got rid of the polypus, and the patient has since borne a thirteen and a half pound child, and has good health.

CASE 2.—Mrs. S. A. T., aged twenty-two, hysterical. I had procured an abortion with her, for relief of puerperal convulsions, on January 24th, 1877. She remained in delicate health, but became enceinte in August. I was called October 1st, and found her emaciated; had retained no food for a week, and in the last two days retained nothing, not even a spoonful of water; the spine was excessively tender, and pressure on the lower dorsal vertebra caused retching. Ordered bis. sub. nit. et ingluvin, equal parts, five grains every three hours, and a blister to the spine. She vomited everything until the blister had done its work; then she retained the medicine, and in a short time was able to take a light diet. October 3d. Some cough; retains food. October 4th. Cough violent, and continued so for three days, interfering with the digestion. October 8th. Find some vomiting; cough still violent, and excited by pressure on the dorsal vertebra; applied blister to the spine, and it remained twenty-four hours without blistering, over the third, fourth and fifth dorsal vertebra. October 9th. Still coughing; applied a fresh blister where the other failed, and in ten hours it blistered, and in twenty-four hours the cough was gone. She recovered, and in May, 1878, was delivered of a fine child, at full term.

CASE 3.—Mrs. A., has uterine trouble of long standing. Was called November 17th, 1878, and found she had diphtheria, which ran a severe course. The fifth day of the disease had slight cough; was fearful of extension of disease into the larynx, but all remedies for it failed to even check its progress. On the decline of the diphtheria, in the third week, the cough still increasing, I examined the spine and found that there was cough on pressing the dorsal vertebra; applied the blister, and when it produced sufficient counter-irritation the cough subsided.

My conclusions are, that a nervous or hysterical cough comes originally from genital disturbances, through the spine, and my treatment is satisfactory to me and my patients. W. S. DODD, M.D.
Amity, Pa.

Remarks on a Case of Puerperal Convulsions.

ED. MED. AND SURG. REPORTER:—

On Nov. 14th was called to see Miss D., single, aged fifteen years, primipara. Found patient in severe puerperal convulsions; was informed by friends that she was in that condition when first noticed, about 4 o'clock in the morning, and her prostration and the terribly lacerated condition of tongue and lips indicated that she might have been in convulsions the greater part of the night. She had complained of severe headache and dizziness the evening previous. From the time found until my arrival, 9 A.M., her convulsions were severe, with but slight intermissions. I controlled the convulsions with chloroform, made an examination, and found the os pretty well dilated; membranes ruptured, but the pains were not very severe. I dispatched a messenger to my office, eight miles distant, for more chloroform, having only half an ounce, hydrate of chloral, and my forceps. The messenger who came for me was a small boy, and I knew nothing of the nature of the case, and was poorly prepared for such an emergency. Gave bromide potass., in full doses. The convulsions increasing in severity, and the prostration momentarily increasing, fearing the patient would die before the messenger arrived with forceps and chloroform, and thinking it would give the woman one more chance for her life (the child being already dead), I determined to deliver by podalic version; this I succeeded in doing after some time, the process being necessarily a slow one, owing to severity of convulsions and almost continuous uterine pain excited by presence of hand, and for lack of chloroform to control convulsions. Placenta and membranes followed immediately, and considerable hemorrhage. Secured uterine contraction. Gave small dose bromide potass. Convulsions ceased, but patient remained in a comatose state, stertorous breathing, and vomited once the peculiar coffee

ground vomit, so indicative of great prostration. Notwithstanding external heat, stimulants, etc., in two hours the convulsions returned, and two hours later patient died. Notwithstanding the tediousness of the version, she was delivered two hours before the forceps arrived, and undoubtedly a still longer time must have elapsed ere nature alone would have accomplished the work. Much more time might have been saved had I had my forceps with me.

Now, was the course pursued the best, under the circumstances above detailed? Editor please answer. J. A. RAWLS, M.D.

Macksburg, Iowa.

A Case of Scrofula.

ED. MED. AND SURG. REPORTER:—

Dec. 4th, 1878, I was called to see K. Z., age sixteen months. On looking at the little patient, I saw, from the swollen neck and cheek, that she was laboring under scrofula. She had been treated four days previous by another physician, but without any benefit. Pulse 150, temperature 105°; had a chill the evening before I was called. I ordered flaxseed poultices to the neck, and gave her five-drop doses of syrup of iodide of iron, in water, three times a day, also quinine, to break up the malarial trouble, and Dover's powders, to keep her quiet. Saw her again at eight next morning; she had rested very well; pulse 120, temperature 100°; treatment continued. Saw her at ten next morning; had not rested very well; she was crying and fretting a good deal; pulse 125, temperature 120½°; treatment continued; bowels moved with castor oil. Saw her again at nine next morning; very restless; pulse 115, temperature 100°; abscess pointing on the neck, which was evacuated by the lance; treatment continued. Saw her again next morning; found her considerably better. Saw her again next morning and discharged the case. WM. F. HAMER, M.D.

Mitchell, Ind.

A Case of Trephining

ED. MED. AND SURG. REPORTER:—

On June 11th, 1877, I was called, in consultation with Drs. Reed and Bennett, of Iberia, Ohio, to see a little son of Geo. Yaker. The boy, aged seven, while playing in the yard, received a kick from a horse, crushing the skull at the posterior and upper border of the left parietal bone, at the junction of its articulation with its fellow and the occipital. The accident happened about six o'clock in the evening, and I saw the case first at 9 o'clock P.M. same day. He was then, and had been from the time of the accident, in a comatose condition. After making a careful examination, thought best to operate at once.

By the light of two oil lamps proceeded to operate by enlarging the scalp wound, and then proceeded to trephine. After removing the button was able to remove two large and one small piece of bone. The larger ones were respectively 1⅜ by 2½ and 1¼ by 1 inch diameter. Was very fortunate in not rupturing the dura mater. Partially closed the wound, leaving an opening for drainage; ordered patient to be placed in a dark room, excluding all persons but regular attendant; that he should be kept well over on his left side. Ice should be applied to wound, and that it should be cleansed with carbolized water. Ordered veratum and aconite, to control circulation; bromide of potass., to produce rest. He was given good diet, and quinine and iron. The cold was kept on the head for nearly two weeks; he was kept in the dark room three weeks.

His recovery was complete, being able to be around in six or seven weeks.

There are several interesting features in the case, principal of which is the time of operating, position and seat of fracture, and his complete recovery. H. R. KELLY, M.D.

Galion, Ohio.

NEWS AND MISCELLANY.

New York Academy of Medicine.

At the annual meeting of the New York Academy of Medicine the following officers were elected: Fordyce Barker, M.D., LL.D., President; William T. White, M.D., T. Gaillard Thomas, M.D., James R. Leaming, M.D., Vice-Presidents; John G. Adams, M.D., Corresponding Secretary; Horace T. Hanks, M.D., Recording Secretary; Edwin F. Ward, M.D., Assistant Secretary; Francis V. White, M.D., Statistical Secretary; Horace P. Farnham, M.D., Treasurer; Austin Flint, M.D., Samuel T. Hubbard, M.D., Isaac E. Taylor, M.D., S. S. Purple, M.D., Trustees.

Vital Statistics of New York City in 1878.

From the return of the Health Board of New York it appears that in 1878 the greatest number of deaths from any one disease was phthisis, and the next most destructive disease was diarrhœa. The deaths from small-pox were two only, the number being the smallest reported for any year since 1824. This small mortality is attributed to the activity of the Vaccinating Corps for several years past. It is believed by President Chandler that this good result is an indication, not to be questioned, of the efficiency of vaccination, and of the great importance of maintaining the strength of the corps.

The number of deaths in 1878, as compared with that of 1877, is given in the following table, the diseases being given by general classification:

Classes of Disease.	*1878.*	*1877.*
Total deaths from all causes.....	27,005	26,203
Total zymotic diseases.....	7,635	8,042
Total constitutional diseases.....	6,422	5,800
Total local diseases.....	10,197	9,720
Total developmental diseases.....	1,709	1,615

The deaths from diphtheria and scarlet fever are but slightly greater in number in 1878 than in 1877. The returns by wards show that the ward in which these two diseases have prevailed to the greatest extent was the Nineteenth. The Fifteenth ward has enjoyed almost complete immunity from the ravages of both scarlatina and diphtheria. While the theory that sewer gas has caused diphtheria has been abandoned, and it has been found impossible to demonstrate that the diseases have clung to the lines marked by original water courses, there has been abundant evidence that

both of these diseases have been aggravated by sewer gas and bad drainage.

It is of interest to know that but one mother bore triplets during the year, while 206 mothers gave birth to twins. One mother of fourteen gave birth to a child, 2 mothers of fifteen gave birth to their second children, and 442 mothers over fifty bore children.

During the year there were born dead 2292 infants. The Coroners had, of all classes of cases, 2970. The number of transcripts of records of births issued was 200; of marriages, 188, and of deaths 1160. The record contains the names of 15 persons whose age at the time of their death was said to be 100 years or more. Of this number but three were men, and all but three of the alleged centenarians were born in Ireland.

Obituary Notices.

—Dr. William K. Scott, an old resident and widely-known citizen of Buffalo, died January 5th, aged ninety-one years. He was a graduate of Dartmouth College, and afterward attended lectures in New York with the late Valentine Mott, and was the first physician licensed by the Censors of the State of New York, being nineteen years of age at that time.

—Dr. S. T. Brooks was found dead in his room at Greenville, Ill., on the morning of the 3d inst., with one hand roasted and a large hole burned in the floor. Appearances indicated the explosion of his lamp, but the fire had gone out, evidently for the want of air. The Doctor had numerous friends and relatives at the East.

—Dr. John Bonner died at the residence of his son, Dr. J. I. Bonner, in Fairfield, Texas, on the morning of the 14th of November, 1878, aged eighty-five years. Dr. Bonner had long retired from professional life, but during his prime was distinguished as a surgeon and physician. He was the last of his generation, leaving neither father nor mother, brother nor sister.

—Dr. Frederic Quin, who recently died in London, was one of the most agreeable of raconteurs and "consummate diners-out" whom London has seen since Mr. Canning. He was of Irish parents, but educated at the Edinburgh school of medicine. He inherited that sarcastic and apparently unconscious wit which is characteristic of his countrymen. Dr. Quin's bright, winning manners early marked him for advancement, and he was, when very young, selected as traveling physician to Prince Leopold, afterward King of the Belgians, and subsequently was named by Lord Liverpool to succeed Mr. Harry O'Meara as medical adviser to Napoleon, who was fretting out his life at St. Helena. But the news of the death of the fallen Emperor, on the 5th of May, 1821, on the very eve of his departure, frustrated this purpose. However, he had improved every opportunity offered him, and he was some time after appointed physician in ordinary to the Duchess of Cambridge. This office familiarized him with royalty, and he became the cherished friend of the present Duke of Cambridge and of the Prince of Wales. No dinner at the Duke's chambers in St. James' Palace, or a party at Sandrigham, was complete without "the Doctor's presence." His cheery manner and gifts as a raconteur made him a special favorite with the young. Dr. Quin was over eighty when he found a tranquil close to his pleasant life, at his chambers, at Queen Anne's Mansion. In London society his well-known face, form and figure will long be missed.

Statistics of Providence.

Dr. E. M. Snow says, in his last Report of the City of Providence—

The total mortality of the year 1878 was 1988, which is at the rate of 19.88 in each 1000 of the population. In 1877 there were 1938 deaths in Providence; in 1876 there were 1862; in 1875 the number was 1915; and in 1874 there were 1987 deaths, or almost exactly the same number as in 1878.

Diphtheria still continues quite prevalent in the city, though there is a decided decrease in the number of cases and in the mortality from the disease. The number of deaths in December, from diphtheria, was 8 less than in November.

Scarlatina is prevalent, though generally in a mild form. This disease will probably increase until spring, while diphtheria will decrease.

Resolutions of Respect.

The following resolutions were passed at the last meeting of the Abingdon (Va.) Academy of Medicine:—

WHEREAS, It has pleased the Great Physician of the Universe to remove from this world, the field of his usefulness, our highly esteemed and worthy friend, Washington L. Atlee, M.D., of Philadelphia, Pa., an Honorary Fellow of the Abingdon Academy of Medicine,

Resolved, That it is with deep and unfeigned regret that we chronicle his death—for the world has lost one of its greatest and best medical and surgical philosophers, teachers and practitioners; the city in which he lived one of its best citizens; the medical profession one of its most faithful and laborious members; this Academy of Medicine one of its most prominent and highly esteemed Fellows; and his family its noble, kind and affectionate head.

Resolved, That we tender the bereaved family of the deceased our sincere condolence and heartfelt sympathy in the hour of their great affliction.

W. F. BARR, M.D.,
GEO. E. WILEY, M.D.,
H. M. GRANT, M.D.,
Committee.

Abingdon, Va., Dec. 2d, 1878.

MARRIAGES.

PETERSON—COBB.—At Zion Church, Dec. 30th, 1878, by the Rev. J. N. Galleher, D.D., assisted by the Rev. William Staunton, D.D., Dr. Wilson Peterson and Emmeline F., daughter of the late Carlos Cobb, all of New York.

DEATHS.

JULIAN.—At Hoboken, N. J., Jan. 1st, 1879, John M. Julian, M.D., in the 68th year of his age.

VEDDER.—On Sunday, Dec. 29th, 1878, at the residence of his brother, Dr. Maus R. Vedder, No. 135 East 57th st., Alexander M. Vedder, M.D., of Schenectady, N. Y., aged 65.